

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Hibiscus sabdariffa*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	(E)-2-HEXENAL	Calyx	--	--		
67	1,8-CINEOLE	Calyx	--	--		
16	ACETIC-ACID	Calyx	--	--		
16	ACETIC-ACID	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
16	ACETIC-ACID	Seed	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
23	ALPHA-TERPINEOL	Calyx	--	--		
32	ALPHA-TOCOPHEROL	Seed	--	500	0.8571112050632521	
5	ALUMINUM	Flower	14	125	0.46945991962978617	
7	ANISALDEHYDE	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
7	ANISALDEHYDE	Leaf	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
30	ANTHOCYANINS	Calyx	10000	20000		
112	ASCORBIC-ACID	Flower	22	200	-0.7732197962345587	
112	ASCORBIC-ACID	Fruit	540	3750	-0.05132528273853201	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	ASPARTIC-ACID	Plant	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
24	BENZALDEHYDE	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
9	BENZYL-ALCOHOL	Leaf	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
9	BENZYL-ALCOHOL	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
53	BETA-CAROTENE	Flower	1	9	-0.4832859262086817	
53	BETA-CAROTENE	Leaf	41	555	1.2790561648525607	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
47	BETA-SITOSTEROL	Seed	--	--		
6	BUTYRIC-ACID	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
28	CALCIUM	Flower	374	3400	-0.6558141831778627	
28	CALCIUM	Leaf	2130	14792	-0.24906661049521867	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	CALCIUM	Seed	3200	6000	0.3404249554690761	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	CALCIUM-OXALATE	Fruit	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	CAMPESTEROL	Seed	--	--		
5	CAPRYLIC-ACID	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
5	CAPRYLIC-ACID	Seed	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
31	CARYOPHYLLENE	Calyx	--	--		
1	CELLULOSE	Seed	--	168000	0.5783739206201094	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	CHOLESTEROL	Seed	--	--		
24	CHROMIUM	Flower	0.6	5.4	1.1789575691255427	
23	CITRIC-ACID	Fruit	37400	170000	2.131164153919124	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
23	CITRIC-ACID	Flower	6233	56667		
4	CLEOMISCOSIN-A	Root Bark	--	--		
2	CLEOMISCOSIN-C	Root Bark	--	--		
2	COBALT	Flower	0.6	5	-0.2767916858148855	
12	COPPER	Flower	5.6	6.2	-1.2821653170679421	
9	DELPHINIDIN	Calyx	--	--		
1	DELPHINIDIN-3-GLUCOSIDE	Calyx	--	--		
1	DELTA-5-AVENASTEROL	Seed	--	--		
4	DELTA-TOCOPHEROL	Seed	--	10	-1	
5	ERGOSTEROL	Seed	--	--		
24	ETHANOL	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
24	ETHANOL	Leaf	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
24	ETHANOL	Seed	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
76	EUGENOL	Calyx	--	--		
15	FIBER	Flower	10000	374600	2.971685757852178	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	FIBER	Leaf	13000	114000	-0.5878237990866672	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	FIBER	Seed	--	120000	-0.11669610810150641	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
13	FORMIC-ACID	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	FORMIC-ACID	Seed	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
6	FURFURAL	Calyx	--	--		
1	GALACTOSE	Flower	--	--		
14	GAMMA-TOCOPHEROL	Seed	--	1490	0.4109961537087907	
4	GLYCOLIC-ACID	Flower	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	GOSSYPETIN	Flower	--	--		
5	HEXANAL	Calyx	--	--		
2	HIBISCIN-CHLORIDE	Plant	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	HIBISCUS-ACID	Flower	--	230000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	IRON	Leaf	15	333	-0.07651054521577247	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
6	IRON	Flower	0.7	6	-1.063209446177288	
3	ISOAMYL-ALCOHOL	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
3	ISOAMYL-ALCOHOL	Leaf	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
3	ISOAMYL-ALCOHOL	Seed	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
2	ISOPROPYL-ALCOHOL	Leaf	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
2	ISOPROPYL-ALCOHOL	Seed	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
2	ISOPROPYL-ALCOHOL	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	LIMONENE	Calyx	--	--		
53	LINALOOL	Calyx	--	--		
27	LINOLEIC-ACID	Seed	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
65	MAGNESIUM	Flower	44	400	-1.7433560491071525	
15	MALIC-ACID	Leaf	--	12500	0.2822875522116279	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	MALIC-ACID	Stem	--	6000		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	MALIC-ACID	Flower	6233	56667	1	
14	MANGANESE	Flower	2	15.1	-0.3393278990760618	
3	MANNOSE	Calyx	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
2	METHANOL	Seed	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
2	METHANOL	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
2	METHANOL	Leaf	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
21	METHYL-SALICYLATE	Calyx	--	--		
3	MUCILAGE	Calyx	15000	650000		
6	MYRISTIC-ACID	Seed	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
39	NIACIN	Flower	1.3	12	-0.8122224292191794	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
39	NIACIN	Leaf	12	132	0.4196344734008024	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
18	OLEIC-ACID	Seed	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
9	OXALIC-ACID	Flower	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
13	PALMITIC-ACID	Seed	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	PALMITOLEIC-ACID	Seed	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
24	PECTIN	Fruit	--	10200	-0.5091471100383528	
24	PECTIN	Calyx	--	31900		
4	PHOSPHORUS	Leaf	480	6458	0.2735050043469738	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	PHOSPHORUS	Seed	--	6000	0.17088218232138022	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	PHOSPHORUS	Flower	110	1000	-1.1392165553859557	
2	PHYSTOSTEROLS	Calyx	--	--		
14	POTASSIUM	Flower	1034	9400	-1.0124925447320965	
34	PROANTHOCYANIDINS	Flower	--	--		
6	PROPIONIC-ACID	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
6	PROPIONIC-ACID	Seed	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)

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43	PROTOCATECHUIC-ACID	Flower	--	--		
15	RIBOFLAVIN	Flower	0.1	0.5	-1.3399966931295562	
15	RIBOFLAVIN	Leaf	1	31	-0.0325494690927309	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
44	SCOPOLETIN	Root Bark	--	--		
60	SELENIUM	Flower	1.6	14.3	1.7265796092320822	
4	SILICON	Flower	1	9.1	-0.45868138661471586	
1	SODIUM	Flower	42	382	-0.3952249147727747	
5	STARCH	Seed	--	111000	-0.8064850823445846	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
8	STEARIC-ACID	Seed	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	STERCULIC-ACID	Seed	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
14	SUCROSE	Calyx	--	2400		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
14	SULFUR	Seed	--	4000	0.8287417461896122	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
6	TARTARIC-ACID	Root	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
6	TARTARIC-ACID	Flower	6233	56667		
31	THIAMIN	Flower	--	3	-0.6757315085489463	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
31	THIAMIN	Leaf	--	12	0.7701228842235702	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	TIN	Flower	1	10	-0.8082238591204874	
93	TOCOPHEROL	Seed	--	--		
3	XYLOSE	Calyx	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
77	ZINC	Flower	--	--		